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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/193,928 11/17/98 ATSUMI

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EXAMINER

BLAU, S

ART UNIT	PAPER NUMBER
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3711

17

DATE MAILED:

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MORRISON LAW FIRM
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MOUNT VERNON NY 10550

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/193,928

Applicant(s)

ATSUMI ET AL.

Examiner

Stephen L. Blau

Art Unit

3711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 20) ☐ Other: _____

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DETAILED ACTION

Continued Prosecution Application

1. The request filed on 29 December 2000 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/193,928 is acceptable and a CPA has been established. An action on the CPA follows.

Note

2. Though claim 19 was canceled, a response to claim 19 is included in this Office Action as discussed over the phone due to it being improperly withdrawn earlier as to a non-elected invention. Claim 19 will not be addressed in further Office actions since it is canceled.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2, 5-6, 9-10, 13-14 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 6-114131 in view of Kusumoto and Jackson.

JP 6-114131 discloses a golf club shaft comprising sequentially: a first angled layer (Fig. 1, Ref. No. 52); a first straight layer formed on a first angled layer (Fig. 1, Ref. No. 53), a second angled layer formed on a first straight layer (Fig. 1, Ref. No. 54), a second straight layer formed on a second angled (Fig. 1), a first angled layer, a first straight layer, a second angled layer and a second straight layer being arranged substantially concentrically about a central portion of a golf club shaft (See left end of Fig. 1), a shaft having a length along a longitudinal direction (Fig. 2), each layer extends over a length of a shaft (Fig. 2, Translator), fiber-reinforced composite material, reinforcing fibers of a second angled layer being oriented at an angle relative to a longitudinal direction of a shaft (Ref. No. 54), a twisting strength of 230 kgf cm and a crushing strength of 22.8 kg (Table of page 4), fibers of a second angled layer being 35-75 degrees relative to a longitudinal direction of a shaft (Fig. 1), and organic fibers in the form of carbon (Col. 3, Lns. 22-41, Translator).

JP 6-114131 lacks at least one of an angle and a thickness of a second angled layer providing a shaft with a torsional strength of at least 120 kgf x m x degrees, a weight of from 30-40 grams, a crush strength of at least 10kg/10 mm, and a second angled layer having a thickness in a range of from .04 to .1mm.

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Kusumoto discloses a shaft made with layers which provide more torsional resistance in the form of circumferential oriented fibers (Ref. No. 2), angled fibers which may exceed the range of 30-55 degrees, and fibers sheets having a thickness not larger than .06 mm (Col. 12 Lns. 12-27). Clearly an artisan skilled in the art of manufacturing a torsional resistant and strong shaft would have selected suitable layers of fibers oriented at an angle with respect to a longitudinal axis, a second angled layer thickness, a torsional strength and crush strength for a shaft in which a torsional strength of at least 120 kgf x m x degrees, a crush strength of at least 10kg/10 mm and a second angled layer having a thickness in a range of from .04 to .1mm are included. In view of the patent of Kusumoto it would have been obvious to modify the shaft of JP 6-114131 to have a shaft with sufficient layers of fibers oriented at an angle with respect to longitudinal axis of a shaft such that there would be a torsional strength of at least 120 kgf x m x degrees and a crush strength of at least 10kg/10 mm in order to provide a shaft to a strong golfer which minimizes errors at impact due to a shaft flexing torsionally. In addition, in view of the patent of Kusumoto it would have been obvious to modify the shaft of JP 6-114131 to have a second angled layer having a thickness in a range of from .04 to .1mm in order to provide a shaft with a sufficient amount of stiffness in the longitudinal and torsional directions.

Jackson discloses a shaft weight of 50 grams (Col. 2, Lns. 12-20) and smaller weight shafts (Col. 3, Lns. 17-25). An artisan skilled in the art of designing shafts to meet the strengths of a player would have selected a suitable weight for a shaft in which a weight of 30-40 grams is included. In view of the patent of Jackson it would have been obvious to modify the shaft of JP

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6-114131 to have weight of 30-40 grams in order to have a light weight shaft and minimize fatigue felt by a player while playing a round of golf.

5. Claims 3-4, 7-8, 11-12 and 15-16 stand rejected under 35 U.S.C. 103(a) as being unpatentable over JP 6-114131 in view of Kusumoto and Jackson as applied to claims 1-2, 5-6, 9-10, 13-14 and 18 above, and further in view of Hedrick and Cheng.

The difference between the claims and JP 6-114131 is that JP 6-114131 does not disclose fibers of a second angled layer being oriented at an angle in a range of 65 to 70 degrees relative to a longitudinal direction of a shaft. Hedrick discloses that angled fibers provide torsional stiffness and fibers parallel to a longitudinal axis of a shaft provide longitudinal stiffness (Col. 2, Lns. 11-30). Cheng discloses angled fibers in a range of 65-70 degrees (Col. 3, Lns. 1-12). In view of the patents of Hedrick and Cheng it would have been obvious to modify the shaft of JP 6-114131 to have fibers oriented as defined by the claims for the second angled layer in order to provide a shaft with more torsional stiffness and less longitudinal stiffness for a golfer who prefers this type of shaft due to the golfers swing.

6. Claims 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 6-114131 in view of Kusumoto and Jackson applied to claims 1-2, 5-6, 9-10, 13-14 and 18 above, and further in view of Cecka.

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Cecka discloses a tapered shaft having a tip end wall thickness substantially twice the thickness of a butt end wall thickness (Figs. 8-9). In view of the patent of Cecka it would have been obvious to modify the shaft of Jackson to have each layer twice the thickness at the tip end compared to the butt end in order to have a tapered shaft to minimize total weight of a shaft yet have a strong tip end to prevent the tip end from fracturing.

Response to Arguments

7. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Blau whose telephone number is (703) 308-2712. The examiner is available Monday through Friday from 8 a.m. to 4:30 p.m.. If the examiner is unavailable you can contact his supervisor Jeanette Chapman whose telephone number is (703) 308-1310. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0858.


Stephen Blau
examiner
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